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CS103-42

Velour, cotton-and-rayon (jacquard and plain)

## U. S. DEPARTMENT OF COMMERCE

JESSE H. JONES, Secretary

## NATIONAL BUREAU OF STANDARDS

LYMAN J. BRIGGS, Director

## COTTON AND RAYON VELOUR

(Jacquard and Plain)

COMMERCIAL STANDARD CS103-42

Effective Date for New Production from November 10, 1942

A RECORDED VOLUNTARY STANDARD  
OF THE TRADEUNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1942

PROMULGATION  
of  
COMMERCIAL STANDARD CS103-42  
for  
COTTON AND RAYON VELOUR  
(Jacquard and Plain)

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On December 16, 1941, at the instance of the Plush Weavers Guild, a general conference of representative manufacturers, distributors, and users of cotton and rayon velour adopted a recommended commercial standard for this commodity. Those concerned have since accepted and approved the standard as shown herein for promulgation by the United States Department of Commerce, through the National Bureau of Standards.

The standard is effective for new production from November 10, 1942.

Promulgation recommended.

I. J. Fairchild,  
*Chief, Division of Trade Standards.*

Promulgated.

Lyman J. Briggs,  
*Director, National Bureau of Standards.*

Promulgation approved.

Jesse H. Jones,  
*Secretary of Commerce.*

# COTTON AND RAYON VELOUR

(Jacquard and Plain)

## COMMERCIAL STANDARD CS103-42

### PURPOSE

1. The purpose of this commercial standard is to establish on a national basis minimum specifications and methods of test for cotton and rayon velour (jacquard and plain) for the guidance of producers, distributors, and users; to serve as an assurance and protection to purchasers; to promote fair competition among manufacturers; and to serve as a basis for certification of quality.

### SCOPE

2. This commercial standard provides a minimum quality for cotton and rayon velour (jacquard and plain) for upholstery purposes based on colorfastness, anchorage of pile, abrasion resistance, weight of pile, and weight and construction of the fabric. It also includes methods of tests and illustrates the recommended manner in which manufacturers and distributors may guarantee compliance with the commercial standard.

### GENERAL REQUIREMENTS

3. *Width.*—The width of the finished fabric exclusive of the selvage shall be not less than that designated by the seller.

4. *Weight.*—The weight of the finished fabric shall be not less than 1.50 pounds per linear yard, 54 inches wide (16 ounces per square yard).

### DETAIL REQUIREMENTS

#### 5. *Pile.*

5a. *Weight of pile.*—The weight of the pile of the finished fabric shall be not less than 0.70 pound per linear yard, 54 inches wide (7.47 ounces per square yard).

5b. *Tufts.*—There shall be not less than 225 pile tufts to the square inch in that part of the finished fabric having complete coverage. (A pile tuft is two exposed ends of a pile loop.)

5c. *Ends of pile.*—The number of ends of pile yarn of the finished fabric shall be not less than 756 per 54-inch width (14 per inch). The cotton-pile yarn shall be not less than two-ply.

5d. *Pile coverage (jacquards).*—The pile tufts shall cover at least 80 percent of the face of the fabric. (That is, the pile may be omitted or cut out from not more than 20 percent of the area for pattern effect.)

5e. *Anchorage*.—When the finished fabric is subjected to the wear test outlined in paragraph 17, the pile shall show no indication of being pushed through the backing of the fabric.

6. *Fabric back (Ground weave)*.

6a. *Warp yarn*.—All warp backing yarn shall be not less than two-ply.

6b. *Number of picks*.—The number of picks per inch in the filling of the finished fabric shall be not less than 24.

7. *Colorfastness*.—When the finished fabric is tested in accordance with the method outlined in paragraph 16, it shall withstand 40 hours' exposure without appreciable change in color.

8. *Resistance to wear*.—When the finished fabric is subjected to the wear test outlined in paragraph 17, there shall be no appreciable change in the appearance of the fabric.

## METHODS OF TEST

9. *Width*.—The fabric is laid out without tension on a flat surface, care being taken that the fabric is smooth and free from wrinkles or creases. The distance from edge to edge (not including selvages) in a line perpendicular to the selvages is measured to the nearest one-sixteenth inch. The average of five measurements made at different places in the cloth as widely separated as practicable is taken to be the width of the fabric.

10. *Standard conditions*.—Tests for weight of fabric, weight of pile, and resistance to wear shall be conducted on samples of the fabric which have been subjected to standard atmospheric conditions of 70° F (21° C) and 65-percent relative humidity for at least 4 hours. A tolerance of  $\pm 2^\circ$  F (1.1° C) is permitted in temperature and  $\pm 2$  percent in relative humidity.

11. *Weight of fabric*.—A sample of the fabric the full width of the fabric and of an accurately measured length equal to at least that of one repeat of the design, but in no case less than 12 inches, shall be accurately weighed and its weight per yard calculated.

12. *Weight of pile*.—A sample of the fabric the full width of the fabric and of a length equal to that of the distance between a repeat of the design is accurately measured. The pile is dissected from the sample, conditioned, accurately weighed, and its weight calculated in pounds per linear yard (54 inches wide).

13. *Tufts*.—The average number of pile tufts per inch in the filling direction shall be determined by counting the tufts (a pile tuft is two exposed ends of a pile loop) in a full pile-covered space of at least 1 inch in not less than five different places staggered across the width of the fabric. The average number of pile rows per inch shall be determined in a similar manner, except that the count shall be made along the length of the fabric. The number of pile tufts per square inch shall be the product of these two averages.

14. *Ends of pile*.—The total number of ends of pile in the fabric shall be determined by counting the tufts in a full pile-covered space of at least 1 inch in not less than five different places staggered across the width of the fabric, and multiplying the average by the width of the fabric in inches found by paragraph 9.



15. *Picks*.—The average number of picks per inch shall be determined by counting the picks in a space of at least 5 inches in not less than three different places in the fabric.

16. *Colorfastness to light*.

16a. *Test specimens*.—Each test specimen shall be approximately  $2\frac{1}{2}$  by 3 inches. The number of specimens required for this test shall be equal to that number necessary to include all of the colors and shades in the fabric.

16b. *Apparatus*.—The apparatus for this test shall be a type FDA Fade-Ometer or its equivalent. A suitable fading lamp consists of a carbon arc enclosed in Pyrex glass, which shall be well cleaned every 24 hours of use, operated on a direct current of approximately 13 amperes or 60-cycle alternating current of approximately 17 amperes, with 140 volts across the arc. The voltage of the power line to the apparatus is 208 to 250 volts. The distance from arc to samples is 10 inches. The air about the samples during exposure is humidified, but not to exceed 50-percent relative humidity, and its temperature is automatically controlled. The temperature of the air in the vicinity of the samples, measured with a mercury thermometer, shall not exceed  $105^{\circ}\text{F}$  ( $40.5^{\circ}\text{C}$ ) during this test.

16c. *Procedure*.—Each specimen shall be placed between opaque covers which will shield it from light except for an area of  $1\frac{1}{2}$  by 2 inches which shall be open to the air on both sides. The specimen so protected shall be exposed in the apparatus described above for a period of 40 hours. The specimen is then removed from the apparatus and allowed to lie in the dark at room temperature for at least 2 hours. In examining the results of Fade-Ometer tests, the exposed portion shall be cut out inside of the line left by the edge of the aperture in the Fade-Ometer slide and the exposed portion shall then be mounted on a similar portion of unexposed cloth and the interpretation of "appreciable change" shall be determined on that comparison.

16d. *Appreciable change*.—A specimen shall be considered acceptable for light fastness when there is no appreciable change in shade. "Appreciable change" is understood to mean a change which, under good light conditions, is immediately noticeable in comparing the tested sample with the original. If closer inspection or a change of angle of light is required to make apparent the change, it shall not be considered appreciable.

16e. If any color or shade in the fabric shows an appreciable change, the fabric shall not be considered satisfactory as to colorfastness.

17. *Resistance to wear*.

17a. *Test specimens*.—One specimen shall be cut in the direction of the warp and one in the direction of the filling, the center portion of which, for a distance of at least 2 inches, shall contain a maximum number of rayon pile tufts. Two additional sets of test specimens shall be similarly cut, one set to contain a maximum number of cotton tufts and the other a maximum amount of the cut-out portion of the fabric.

17b. *Apparatus*.—The apparatus shall be the Wyzenbeek Wear Test Machine, using 8-ounce army duck (10 ounces per square yard) as the abrasive agent, or equivalent apparatus.

\* 17c. *Procedure*.—In using the Wyzenbeek machine, the specimens shall be inserted in the apparatus under a tension of  $2\frac{1}{2}$  pounds and

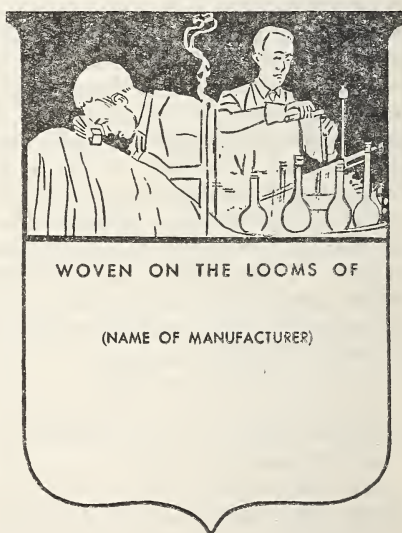
the load of the specimens on the abrasive shall be  $2\frac{1}{2}$  pounds. The specimens shall be subjected to 10,000 single rubs at a speed of approximately 180 single rubs per minute. The specimens shall then be removed and examined for wear and anchorage of pile. When other types of apparatus are used, equivalent control testing procedure shall be followed.

### LABELING

18. It is recommended that the following statement be incorporated in labels or tags guaranteeing compliance with the commercial standard:

The ----- Company guarantees that this cotton and rayon velour complies with all the requirements of Commercial Standard CS103-42 as issued by the National Bureau of Standards of the United States Department of Commerce.

19. The following illustrates how an important group of producers have arranged to guarantee compliance with the commercial standard. Cotton and rayon velour produced by members of this group to conform with the standard may be readily identified by means of the following label.



### EFFECTIVE DATE

The standard is effective for new production from November 10, 1942.

### STANDING COMMITTEE

The following individuals comprise the membership of the standing committee, which is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Each

organization nominated its own representatives. Comment concerning the standard and suggestions for revision may be addressed to any member of the committee or to the Division of Trade Standards, National Bureau of Standards, which acts as secretary for the committee.

- BERNARD DAVIS (chairman), La France Industries, 4631 Adams Ave., Frankfort, Philadelphia, Pa. Representing Plush Weavers Guild.
- W. D. APPEL, Division of Organic and Fibrous Materials, National Bureau of Standards, Washington, D. C.
- MRS. EUNICE F. BARNARD, National Council of Women, 30 Rockefeller Plaza, New York, N. Y.
- T. L. BLANKE, Merchandising Division, National Retail Dry Goods Association, 101 West 31st St., New York, N. Y.
- ALLEN S. HATCHER, Northampton Textile Co., Mount Holly, N. J. Representing Plush Weavers Guild.
- JOSEPH A. KAUFMAN, Kaufman Plush Co., Pensdale, Mitchell & Rector Sts., Roxborough, Philadelphia, Pa. Representing Plush Weavers Guild.
- THOMAS MADDEN, John J. Madden Manufacturing Co., 16th & Sherman Drive, Indianapolis, Ind. Representing National Association of Furniture Manufacturers.
- E. C. McCALL, Lenoir Chair Co., Lenoir, N. C. Representing Southern Furniture Manufacturers Association.
- MISS LAURA PRATT, Sears, Roebuck & Co., 925 Homan Ave., Chicago, Ill. Representing Mail Order Association of America.
- J. A. SAMPSON, Phoenix Chair Co., Sheboygan, Wis. Representing National Association of Furniture Manufacturers.
- FRANK STUTZ, Better Fabrics Testing Bureau, Inc., 101 West 31st St., New York, N. Y.
- G. R. TURNER, U. S. Testing Co., 1415 Park Ave., Hoboken, N. J. Representing American Council of Commercial Laboratories.
- American Association of University Women. (Invited to appoint representative.)
- American Home Economics Association. (Invited to appoint representative.)
- National Retail Furniture Association. (Invited to appoint representative.)
- HERBERT A. EHRLMAN (secretary), Division of Trade Standards, National Bureau of Standards, Washington, D. C.

## HISTORY OF PROJECT

The quality of cotton and rayon velour, both jacquard and plain, was reported to have deteriorated to a degree that made it unsatisfactory to many for use as an upholstering material. Desiring to restore the quality of the fabric to that which would be satisfactory for use as an upholstery material, The Plush Weavers Guild on February 10, 1941, requested the cooperation of the National Bureau of Standards toward the establishment of a commercial standard, and submitted data for such a standard.

Agreeable to that request, a proposed commercial standard was referred to associations representing furniture manufacturers for advance consideration and comment. On November 17, 1941, a joint meeting of committees representing the fabric manufacturers and furniture manufacturers was held in Cleveland, Ohio, at which the proposed commercial standard was considered and adjusted. The adjusted draft was then considered and adjusted at a General Conference of producers, distributors, and users in New York City on December 16, 1941, with the recommendation that the draft so revised be referred to all interested for acceptance.

This draft was submitted in January 1942 to those concerned for written acceptance, and announcement of the success of the project was issued on August 10, 1942. The standard, CS103-42, became effective for new production on November 10, 1942.







## ACCEPTANCE OF COMMERCIAL STANDARD

If acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this commercial standard.

Date -----

Division of Trade Standards,  
National Bureau of Standards,  
Washington, D. C.

Gentlemen:

Having considered the statements on the reverse side of this sheet, we accept the Commercial Standard CS103-42 as our standard of practice in the

Production <sup>1</sup>                      Distribution <sup>1</sup>                      Testing <sup>1</sup>                      Use <sup>1</sup>

of cotton and rayon velour.

We will assist in securing its general recognition and use, and will cooperate with the standing committee to effect revisions of the standard when necessary.

Signature of individual officer -----  
(in ink)

(Kindly typewrite or print the following lines)

Name and title of above officer -----

Organization -----  
(Fill in exactly as it should be listed)

Street address -----

City and State -----

<sup>1</sup> Please designate which group you represent by drawing lines through the other three. Please file separate acceptances for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interests, trade papers, colleges, etc., desiring to record their general approval, the words "in principle" should be added after the signature.

## TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices, and the like.

2. *The acceptor's responsibility.*—The purpose of commercial standards is to establish for specific commodities, nationally recognized grades or consumer criteria, and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard, and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the commercial standard where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of commercial standards on a Nation-wide basis is fourfold: first, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active, valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.



